

WHAT IS CLAIMED IS:

1. A recording apparatus which records data on a recording medium comprising:

5 a suction unit for sucking a recording medium which has passed in a recording unit, said suction unit having a plurality of suction ports in a transporting direction of the recording medium;

10 wherein when the recording medium is not transported on the suction unit, the suction ports are closed, and when the recording medium is transported on the suction unit, the suction ports are sequentially opened so as to spread a sucking area on the suction unit in accordance with transportation of a leading end of the recording medium.

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2. A recording apparatus according to Claim 1, wherein the suction ports are opened and closed by a shutter.

20 3. A recording apparatus according to Claim 2, wherein the shutter is operated and closed by a cam mechanism.

4. The recording apparatus according to Claim 2, wherein holes in accordance with the suction ports are formed on the shutter.

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5. A recording apparatus according to Claim 4, wherein the holes formed on the shutter are provided so as to be longer on an upstream side of the transportation of the recording medium than on a downstream side of the transportation of the recording medium.

6. A recording apparatus which records data on a recording medium comprising:

a suction unit for sucking a recording medium which has passed in a recording unit, wherein said suction unit is positioned between a platen opposed to a recording head and discharging portion; and

a changing unit for changing a sucking force of the suction unit in accordance with a property of the recording medium.

7. A recording apparatus according to Claim 6, wherein the sucking force of the suction unit is changed so as to become larger as the recording medium becomes thicker.

8. A recording apparatus according to Claim 6, wherein the changing unit includes an operation unit operable for a user.

9. A recording apparatus according to Claim 8, wherein

the operation unit is constituted by a feeding key of the recording medium in an operation panel.

10. A recording apparatus according to Claim 8, wherein  
5 the operation unit performs an operation of changing the sucking force of the suction unit by multi-step.

11. A recording apparatus according to Claim 8, wherein  
the operation unit is available when the recording medium  
10 is set.

12. A recording apparatus according to any one of Claims  
1 through 5, further comprising a changing unit for  
changing the sucking force of the suction unit.

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13. A recording apparatus according to Claim 6, the  
suction unit including a plate member constituting a  
suction portion on a transportation surface of the  
recording medium and having a plurality of suction ports,  
20 a shutter provided under the plate member having a  
plurality of holes corresponding to the suction ports,  
and a fan for generating a sucking force on the suction  
ports,

wherein the shutter opens and closes the suction  
25 ports by relatively moving with respect to the plate

member.

14. A recording apparatus according to Claim 13, wherein the shutter is operated and closed by a cam mechanism.

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15. A recording apparatus according to Claim 13, wherein the suction ports are constituted by at least two rows of the suction ports, the suction ports in each row are arranged substantially perpendicular to a transporting  
10 direction of the recording medium,

the holes formed on the shutter are constituted by at least two rows of the holes correspondingly to the suction ports, and

the holes in a row provided on an upstream side of  
15 the transportation of the recording medium are formed longer than the holes in a row provided on a downstream side of the transportation of the recording medium.

16. A recording apparatus which records data on a  
20 recording medium comprising:

a plate having a plurality of suction ports; and  
a vacuum that creates a negative pressure at the suction ports,

wherein the negative pressure at the suction ports  
25 is changed by selectively opening and closing the suction

ports.

17. A recording apparatus according to Claim 16 further comprising an operation unit operable for by a user.

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18. The recording apparatus according to Claim 17, wherein the operation unit is constituted by a feeding key for the recording medium in an operation panel.

10 19. The recording apparatus according to Claim 16 further comprising:

a shutter provided under the plate having a plurality of holes corresponding to the plurality of ports; and

a fan that creates a sucking force,

15 wherein the shutter opens and closes the plurality of ports by relatively moving with respect to the plate.

20. The recording apparatus according to Claim 19, further comprising

20 at least two rows of the plurality of ports; and

at least two rows of the holes formed on the shutter corresponding to the plurality of ports,

wherein the ports in each row are arranged substantially perpendicular to a transporting direction

25 of the recording medium, and

wherein the holes in a row provided on an upstream side of the transportation of the recording medium are formed longer than the holes in a row provided on a downstream side of the transportation of the recording  
5 medium.

21. A recording apparatus according to Claim 1, wherein the sucking area is defined on an area of the suction unit on which the recording medium is actually transported,  
10 and all of the suction ports in the sucking area are opened to suck the recording medium.

22. A recording apparatus according to Claim 2, wherein said shutter is formed in a box-like member, on a surface  
15 of which a plurality of holes are arranged, and is movably provided to a plate member of the suction unit on which the suction ports are formed,

wherein one of the suction ports is in an opened state when said suction port coincides with a  
20 corresponding hole of the shutter, and

wherein the suction port is in a closed state when the suction port is shifted from the corresponding hole of the shutter.

25 23. A recording apparatus which records data on a

recording medium comprising:

a suction unit for sucking a recording medium which has passed in a recording unit, said suction unit having a plurality of suction ports in a transporting direction  
5 of the recording medium,

wherein when the recording medium is not transported on the suction unit, the suction ports are closed, and when the recording medium is transported on the suction unit, the suction ports are sequentially opened in  
10 accordance with transportation of a leading end of the recording medium, and

wherein the suction ports are opened and closed by a shutter.

15 24. A recording apparatus which records data on a recording medium comprising:

a suction unit for sucking a recording medium which has passed in a recording unit; and

a changing unit for changing a sucking force of the  
20 suction unit in accordance with a property of the recording medium,

wherein the sucking force of the suction unit is changed so as to become larger as the recording medium becomes thicker.

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25. A recording apparatus which records data on a recording medium comprising:

a suction unit for sucking a recording medium which has passed in a recording unit; and

5 a changing unit for changing a sucking force of the suction unit in accordance with a property of the recording medium,

wherein the changing unit includes an operable for a user.

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26. A recording apparatus which records data on a recording medium comprising:

a suction unit for sucking a recording medium which has passed in a recording unit; and

15 a changing unit for changing a sucking force of the suction unit in accordance with a property of the recording medium,

wherein the suction unit includes a plate member constituting a suction portion on a transportation surface  
20 of the recording medium and having a plurality of suction ports, a shutter provided under the plate member having a plurality of holes corresponding to the suction ports, and a fan for generating a sucking force on the suction ports, and

25 wherein the shutter opens and closes the suction



ports by relatively moving with respect to the plate member.

27. A recording apparatus according to Claim 1, wherein  
5 the sucking area increases as the sucking area is spread.

28. A recording apparatus which for performing a recording on a recording medium comprising:

a suction unit for sucking a recording medium which  
10 has passed in a recording unit; and

a recording medium transportation device for sucking and transporting the recording medium supplied onto a recording medium transportation surface,

wherein a transportation amount of the recording  
15 medium is corrected in accordance with a sucking drag.

29. The recording medium transportation device according to claim 28, wherein the sucking drag is calculated based on a size of the recording medium.

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30. The recording medium transportation device according to claim 28, wherein the sucking drag is calculated based on a property of the recording medium.

25 31. The recording medium transportation device

according to claim 28, wherein the sucking drag is calculated based on a transportation position of the recording medium.

5 32. A method for controlling a transportation of a recording medium, comprising steps of:

obtaining a sucking drag according to the recording medium; and

10 correcting a transportation amount of the recording medium based on the sucking drag.

33. The method for controlling the transportation of the recording medium according to claim 32, wherein the sucking drag is calculated based on a size of the recording  
15 medium.

34. The method for controlling the transportation of the recording medium according to claim 32, wherein the sucking drag is calculated based on a property of the  
20 recording medium.

35. The method for controlling the transportation of the recording medium according to claim 32, wherein the sucking drag is calculated based on a transportation  
25 position of the recording medium.

36. A method for controlling a transportation of a recording medium, comprising steps of:

calculating a sucking force based on a negative  
5 pressure generated in a sucking unit and a sucked area  
of the recording medium;

calculating a sucking drag based on the sucking force  
and at least one of a size and a property of the recording  
medium; and

10 determining a correction amount to a transportation  
amount of the recording medium based on a relationship  
between the sucking drag and a cumulative error of the  
transportation amount.